

**REMARKS**

The remainder of this Amendment is set forth under appropriate subheadings for the convenience of the Examiner.

**Claim Amendments**

Claim 1 is amended to recite the preferred molecular weights of the first and second polymers. This amendment is supported by the specification as filed, at page 4, lines 10-19.

Claims 7 and 28 are amended to correct their dependencies.

**Rejection of Claims Under 35 U.S.C. §102(b) over Cahill**

Claims 1, 4, 7, 8, 10, 11, 19, 21, 24, 28, 31 and 43-45 stand rejected under 35 U.S.C. §102(b) as being anticipated by U.S. 5,998,500 ("Cahill"). The Examiner stated that Cahill discloses a bimodal polymer composition comprising at least two polymers: polymer I with cationic character and polymer II with anionic character, forming an interpenetrating network (IPN).

Cahill, at col. 6, lines 54-55, states that the molecular weight of the polymers used to form the IPN *should be* between about 400 and 800 daltons.

Applicants have amended base Claim 1 to recite the preferred molecular weights of the first and second polymers. As amended, the molecular weight range of each of the first and second polymers of Applicants' claimed bimodal polymer composition ranges from between about 1,000 daltons to about 1,000,000 daltons.

The subject matter of Claim 1 is novel over the teachings of Cahill. The remaining claims rejected for lack of novelty in view of Cahill are all dependent, either directly or indirectly, from Claim 1 and, therefore, they too are novel over Cahill.

**Rejection of Claims Under 35 U.S.C. §102(b) and/or §103(a)**

Claim 45 stands rejected under 35 U.S.C. §102(b) as being anticipated by or, in the alternative, under §103(a), as being obvious over Cahill. The Examiner stated that it would have been obvious to one of ordinary skill in the art to have optimized the percentage of each

monomer or to have used a certain combination of monomers or polymers from the list of monomers disclosed by Cahill and claimed by Applicant to arrive at the same T<sub>g</sub> as claimed by Applicants.

Applicants' Claim 45 is dependent from Claim 1, which is discussed above. It is well-known that the glass transition temperatures of polymers are dependent, at least in part, upon their molecular weight. The molecular weight of Applicants' claimed interpenetrating molecular networks is much different than that of the interpenetrating polymer networks of Cahill. There is no indication anywhere in the references of record why one of ordinary skill in the art would be motivated to depart from the teachings of Cahill to obtain the molecular weight of the first and second polymers to thereby form an interpenetrating polymer having the glass transition temperature of Applicants' claimed interpenetrating polymer networks.

The polymers of Claim 45 meet the requirements of 35 U.S.C. §§ 102(b) and 103(a) in view of Cahill.

Claims 1, 4, 8, 10-12, 14-16, 18, 19, 21-24, 28, 31, 41-45, 53-56 and 58 stand rejected under 35 U.S.C. §102(b) as being anticipated by or, in the alternative, under §103(a), as being obvious over U.S. 6,482,394 ("Schehlmann"). Specifically, the Examiner stated that Schehlmann discloses hair treatment compositions comprising at least one anionic and at least one cationic polymer, but is silent regarding whether these polymers form an interpolymer penetrating network. According to the Examiner, Schehlmann's polymers are made in the same manner and with the same monomer units as claimed by Applicants. Therefore, according to the Examiner, the compositions of Schehlmann inherently include Applicants' claimed interpenetrating polymer network (IPN).

As the Examiner stated, Schehlmann is silent on the issue of interpenetrating polymer network formation. Moreover, there is no description of the *method* by which the composition of Schehlmann is made. The presence of an interpenetrating polymer network will depend upon the method by which polymerization takes place. Therefore, the polymers of Schehlmann do not necessarily include interpenetrating polymer networks, nor do they necessarily include the same features of Applicants' claimed interpenetrating polymer networks. Schehlmann does not inherently anticipate the subject matter of Applicants' claimed invention.

In addition, Schehlmann does not teach a molecular weight range of each of first and second polymers of a bimodel interpenetrating polymer network composition ranging from between 1,000 daltons to 1,000,000 daltons, as claimed by Applicants.

There is no indication in any of the references of record why one of ordinary skill in the art would have been motivated to modify the teachings of Schehlmann to obtain Applicants' claimed bimodel polymers.

Applicants' claimed interpenetrating polymer networks meet the requirements of 35 U.S.C. §§ 102(b) and §103(a) in view of Schehlmann.

Rejection of Claim 7 Under 35 U.S.C. §103(a)

Claim 7 stands rejected as being obvious over Schehlmann in view of Cahill. Without acquiescing to the Examiner's arguments, Applicants submit that Claim 7 is dependent on Claim 1, as amended, and therefore is non-obvious in view of 35 U.S.C. §103 over Cahill and/or Schehlmann for the reasons presented above.

Reconsideration and withdrawal of the rejection are respectfully requested.

**CONCLUSION**

Claim 1 has been amended to limit the molecular weight of each of first and second polymers of an interpenetrating polymer network to a molecular weight range of between about 1,000 daltons and about 1,000,000 daltons. The remaining claims under consideration all depend, either directly or indirectly, from independent Claim 1. As amended, Applicants' claimed interpenetrating polymer networks are not anticipated, either explicitly or inherently, by any of the references of record under 35 U.S.C. § 102. Neither is Applicants' claimed subject matter obvious in view of 35 U.S.C. § 103. Therefore, Applicants respectfully request reconsideration and withdrawal of all outstanding rejections.

If the Examiner feels that a telephone conference would expedite prosecution of this case, the Examiner is invited to call the undersigned.

Respectfully submitted,

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